

REMARKS

Claim 164 has been amended to end in a period, and Claims 308, 320, 332, 341 and 353-356 have been amended to clarify the specificity of the claimed antibody or antigen-binding fragment. Claims 151-153, 155-165, 167-175, 177-185, 187-194, 196-220, 246, 248-257, 259-266 and 292-356 are pending. Claims 151-153, 155-165, 167-175, 177-185, 187-194, 196-220, 246, 248-257, 259-266 and 292-307 are allowed.

Examiner Interview

The undersigned thanks the Examiner for conducting a telephonic interview on November 22, 2004. Claims 308, 320, 332, 341 and 353-356 were discussed. The Examiner indicated that claims that recite that the antibody or antigen-binding fragment binds a C-C chemokine receptor 3 protein that is expressed on a whole cell would be allowable, and requested that Applicants point out the portions of the application that show that they were in possession of antibodies and antigen-binding fragments thereof that bind CCR3 protein expressed on a whole cell.

Support for Amended Claims

Support for amended Claims 308, 320, 332, 341 and 353-356 is found throughout the application as originally filed. For example, Applicants teach that agents that bind CCR3 protein can be identified using whole cells or a cellular fraction.

In one embodiment, a receptor protein can be expressed in cells stably or transiently transfected with a construct comprising a nucleic acid sequence which encodes a receptor of the present invention. The cells are maintained under conditions appropriate for expression of receptor. The cells are contacted with a compound under conditions suitable for binding (e.g., in a suitable binding buffer), and binding is detected by standard techniques. To measure binding, the extent of binding can be determined relative to a suitable control (e.g., compared with background determined in the absence of compound, compared with binding of a second compound (i.e., a standard), compared with binding of compound to untransfected cells). Optionally, a cellular fraction, such as a membrane fraction, containing receptor can be used in lieu of whole cells (see e.g., Example 9). ...

In one embodiment, direct inhibition of the binding of a first compound (e.g., a chemokine such as RANTES) to a human CKR-3 receptor by a second test compound is monitored. For example, the ability of a compound to inhibit the binding of ¹²⁵I-labeled RANTES or ¹²⁵I-labeled MCP-3 to human CKR-3 can be monitored. Such an assay can be conducted using either whole cells (e.g.,

eosinophils, or a suitable cell line containing nucleic acid encoding a human CCR-3 receptor) or a membrane fraction from said cells, for instance.

(Specification at page 48, lines 17-32, and page 49, lines 23-32.) (Emphasis added.)

Applicants also teach that CCR3 protein function can be detected or assessed using cells or a cellular fraction.

The signalling function of a protein or polypeptide encoded by hybridizing nucleic acid can be detected by enzymatic assays for G protein activity responsive to receptor binding (e.g., exchange of GTP for GDP on the G protein α subunit, using membrane fractions). G protein coupling can be further assessed, for example, using assays in which stimulation by G protein is blocked by treatment or pre-treatment of cells or a suitable cellular fraction (e.g., membranes) with specific inhibitors of G proteins

(Specification at page 25, lines 10-21.) (Emphasis added.)

Applicants further teach that the antibodies and antigen-binding fragments of the invention can be used to detect CCR3 expressed on cells or to sort cells using flow cytometry or fluorescence activated cell sorting (FACS). (Specification at page 41, lines 9-16.) Applicants describe the results of FACS studies in which antibodies were used to detect expression of CCR3 on the surface of whole cells (transfected cells and primary human cells), for example, transfected insect cells and human eosinophils, peripheral blood lymphocytes, monocytes, neutrophils and activated T cells. (Specification at page 93, line 5 through page 94, line 29; page 98, lines 1-14; and page 126, line 17 through page 128, line 12.)

These teachings clearly demonstrate to the person of skill in the art that Applicants were in possession of antibodies and antigen-binding fragments that bind a C-C chemokine receptor 3 protein that is expressed on the surface of a whole cell at the time the application was filed. Accordingly, the amended claims are supported by the application as originally filed and this Amendment adds no new matter.

Rejections Under 35 U.S.C. § 102

- a) Claims 308-310, 313-315, 317-322, 325-327, 329-336, 338-343, 345-347 and 349-356 are rejected under 35 U.S.C. § 102(a) as being anticipated by WO 94/11504 (Horuk *et al.*).

- b) Claims 308-312, 314, 315, 317-324, 326, 327, 329-336, 338-344, 346, 347, 349-353 and 355 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,707,815 (Charo *et al.*)

In maintaining the rejections, the Examiner states that the claims do not recite that the antibody or antigen-binding fragment binds a receptor that is actually in the cell membrane on the surface of a cell. (Office Action at page 3 and page 4.)

Independent Claims 308, 320, 332, 341 and 353-356 have been amended to recite the phrase “wherein said antibody or antigen-binding fragment binds a C-C chemokine receptor 3 protein that is expressed on the surface of a whole cell.” Reconsideration and withdrawal of the rejections are requested.

Rejections Under 35 U.S.C. § 103

- a) Claims 308-311, 315-320, 326-332, 335-341 and 346-356 are rejected under 35 U.S.C. § 103(a) as being obvious over WO 94/11504 (Horuk *et al.*) in view of U.S. Patent No. 5,530,101 (Queen *et al.*).
- b) Claims 308-311, 315-320, 326-332, 335-341 and 346-356 are also rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,707,815 (Charo *et al.*) in view of U.S. Patent No. 5,530,101 (Queen *et al.*).

In maintaining the rejections, the Examiner states that the claims do not recite that the antibody or antigen-binding fragment binds a receptor that is actually in the cell membrane on the surface of a cell. (Office Action at page 6 and page 8.)

Independent Claims 308, 320, 332, 341 and 353-356 have been amended to recite the phrase “wherein said antibody or antigen-binding fragment binds a C-C chemokine receptor 3 protein that is expressed on the surface of a whole cell.” Reconsideration and withdrawal of the rejections are requested.

Information Disclosure Statements

Supplemental Information Disclosure Statements (SIDSs) were filed on April 11, 2003, May 21, 2003 and August 25, 2003. Acknowledgment of consideration of the SIDS and Second SIDS is requested in the next Office Communication.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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